VEIC Review of

2018-2020 NH Statewide Energy Efficiency Plan

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Commercial Programs / Combined Heat and Power

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Characteristics of Success

- Establish clear framework
- Deploy CHP systems where appropriate
- Stimulate customer-sited generation and distributed generation

Best Practices for Achieving Success, and Why

- Establish realistic baselines
  - Are savings calculated from assumption that there would be two separate energy generation sources (thermal and power) on-site?
- Develop program structure/guidance to distinguish between thermal-led CHP (incremental power generation) and electric-led CHP (incremental heat recovery)
- Develop program structure/guidance to distinguish between fossil-fueled and renewable-fueled CHP and distinguish between energy savings, customer sited generation, and fuel switching
- Develop program structure/guidance for eligible technologies and applications and develop minimum full-load combined efficiency and energy outputs requirements for the different CHP technologies

Overview of Program Proposed for NH

- There was no specific program proposed for NH in the plan

- Draft Plan states that “during the three-year period..[the utilities] will investigate the viability of CHP as a custom measure.”

Key Aspects of Approach VEIC Supports

- Plan states there is need to figure out “to what extent the electric and natural gas companies can participate in the installation of the highest efficiency units.” (p.105)
  - This recognizes that CHP is a big and complicated category
  - This recognizes the need for developing a framework to measure Customer Sited Generation and claimed electric generation as savings from the utilities perspective.
  - Also recognizes the need to develop framework to measure natural gas use reductions and claim as savings.
  - This recognizes the need to support only the highest efficiency units.

Key Aspects Approach VEIC Does Not Support

- There is an opportunity to be more specific to set goals and guidance for different categories of CHP, including:
  - Steam boilers adding a back-pressure steam turbine
  - IC engine gen-sets adding heat recovery
  - Gas turbines
  - Micro-turbine and fuel cell
  - Organic Rankine Cycle (ORC) units
- There is an opportunity to develop goals and program guidance for fossil fuels vs. renewables (including woodchips, pellet, biogas, etc.) for CHP

Identify Key Drivers in the Draft Plan

- The Plan should be more specific and provide a framework for categories of CHP where clear benefits can be claimed and verified.

VEIC Recommendations

Recommendations	Rationale
1. Plan should set guidance for when and where CSG can be claimed as electric savings. 2. Plan should set guidance for when and where thermal savings can be claimed. 3. Plan should set guidance for the use of renewables for CHP.	1. On-site natural gas power generation behind the meter may look like electrical efficiency to the electric utility but could be a net increase in natural gas fuel. 2. Waste heat recovery can produce valid energy savings. 3. Units of energy saved might be minimal in the situation of a fuel switch but could significantly decrease fossil fuel consumption.

Suggested Improvements for the Draft Document

- Section 7.5, second paragraph, page 105:
  - Add more detailed discussion of:
    - Establishing CHP program goals
    - Establishing baselines for CHP
    - ID categories of CHP technologies and applications can effectively claim energy savings

For More Information

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